DLY1746-DLY1749

Integrated PTZ System

Installation and Operations Manual

Model Number: DLY1746-DLY1749

Description: Integrated PTZ Camera Positioning System with box camera and Motorized Lens

Pan Tilt Camera Positioning System with Camera and Motorized Lens

User Manual

Functions & Installation

Thanks for purchasing our product. Prior to installation and use of this product, please read this manual carefully.

Features and specifications described in this manual are subject to change without further notice. Please contact us or legal distributors if you have any questions which are not included in this manual.

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1. Important Safeguards and Warnings

1.1 Warning

1.1.1 Prior to installation and use of this product, read this user manual. Keep this manual.

1.1.2 The WARNINGS in this manual should be observed. Follow all instructions.

1.1.3 Turn off the power before cleaning the product. Don't use liquid cleaners or aerosol cleaners. Only use wet-cloth for cleaning.

1.1.4 Only use attachments/accessories specified in this manual.

1.1.5 Use only with the power supply specified in this manual.

1.1.6 Carefully protect all cables including power, video and connectors.

1.1.7 Please install arrester to avoid lighting/surge.

1.1.8 To avoid fire and electric shock, don't use excessive long and overload cables.

1.1.9 Servicing is required when the product has been damaged in any way, such as liquid has been spilled or objects have fallen into the product.

1.1.10 Don't install the product onto unstable installation location. Use only installation methods and materials capable of supporting four times the maximum specified load.

1.1.11 Don't install, use or store the product in flammable and explosive place.

1.1.12 Don't install or use the product in places exposed to excessive moisture, dust or smoke. Keep the product away from heat source.

1.1.13 Don't disassemble the product for servicing. Contact us or legal distributors.

1.1.14 Always turn off power and contact us or legal distributors if abnormal smoke occurs.

1.1.15 Servicing is required in any case of the following situations, contact us or legal distributors:

A. Power supply cord or communication cable has been damaged
B. Incorrect power supply or input voltage
C. The product has been dropped or the cover has been damaged
D. Abnormal functions occur
E. The product doesn't work by following this manual

1.1.16 Only use replacement parts recommended by company.

1.2 Caution

1.2.1 Avoid stress, vibration, steeping during transportation, storage and installation.

1.2.2 Keep the product away from magnetic field

1.2.3 Turn off the power before moving or re-installing the product

1.2.4 Don't block any ventilation openings.

1.2.5 Company will be not in charge of the troubles due to unauthorized servicing. Please contact us or legal distributors if the product doesn't work well

1.2.6 Never expose the product to sunlight or harmful rays directly whatever use or nonuse. Fatal damage to the CCD or internal circuit will be caused

1.2.7 Actions like water-proof, moisture-proof and dust-proof are needed in the case of outdoor application.

Attention: To avoid short circuit, please ISOLATE all exposed cables from Pan/Tilt to Housing before putting power to Pan/Tilt.

2. Introduction

2.1 Application

2.1.1 As a high-end security surveillance product, Outdoor High-Duty Variable Speed Pan/Tilt has construction of high-strength aluminum alloy frame and modified plastic cover. It features anti-wind design, power off protection (self-lock) and smooth motion. It also features variable speed, 360 degrees continuous movement, auto scan, auto cruise, keep watch and OSD menu…etc. This Pan/Tilt is specially used for surveillance in far-field, like application in field of fire-fighting in forest, coast and border, bridges over sea or river and freeway…etc.

2.2 Glossary

2.2.1 Preset

Programmed video scene, based on a specific pan, tilt, zoom and focus settings, and stored in domes.

2.2.2 Auto Scan

Allows the dome to continuously pan between the scan limits. The scan limits are two points around the dome's pan axis, which define a surveillance area. The Auto Scan speed is programmable.

2.2.3 Auto Cruise

Add the preset points into cruise group. Switch to and check the preset points in order by specified dwell time. The dwell time is programmable.

2.2.4 Keep Watch

Return the dome to a specified preset position at a fixed time after ending manual operation. Keep watch functions to scan, cruise, pattern a specified route

2.2.5 OSD Menu

On Screen Display Menu laid out on video signal.

Attention: OSD Menu can be operated by keyboard to control the Pan/Tilt implement functions specified in menu.

2.3 Specifications

Table 1

Input Voltage	24VAC±25%　50 Hz/60Hz
Power of Pan/Tilt	≤ 85W(including 35W for heater)
Power Output for Enclosure	≤ 85W (AC24V/3.5A)
Lens Interface	6VDC~12VDC for Zoom, Focus control
Protocol	Pelco D/Pelco P
Baud Rate	2400/4800/9600/19200
Manual Speed	Pan:0.01~12 °/s;Tilt:0.01~8 °/s
Movement	Pan:0~360 ° continuous;Tilt:-45 °~45 °
Communication	RS-485/RS-422
Protocol	Pelco D/Pelco P
Baud Rate	2400/4800/9600/19200
Preset	Up to 80
Auto Scan	Up to 5 lines, based on OSD function
Auto Cruise	Up to 8 groups, based on OSD function. Up to 80 presets in a group.
Keep Watch	Programmed a preset, an auto scan line or an auto cruise group, based on OSD function
OSD menu	Available
AUX	4 Normally Open Relay Outputs, 30VDC/2A
Operation Temperature	.-35℃~+65℃, ≤ 90%RH
Heater	Optional Configuration. ON: 8℃±5℃/OFF: 20℃±5℃
Dimensions	L x W x H: 339 ×196 ×371mm
Installation	Outdoor
Waterproof	IP66
Lightning Protection	Built-in Lightning and Surge Protection
Load Mode	Top Load
Max Load	43Kg (With tilt range -45°~225°. Tilt range is adjustable and configured at factory. See attention ※)
Weight	17Kg
Construction	Aluminum Alloy Frame and Modified PC Cover

※Attention:

1 Top load: Tilt range is able to be adjustable and should be configured at factory.

Tilt Range	Maximum Load
-30°~210°	55Kg
-45°~225°	43Kg
-60°~240°	32Kg
-75°~255°	30kg

2 Call Preset 98 to run Auto Cruise, Group 1.

3 Call Preset 99 to run Auto Scan, Line 1.

4 Up to 5 Auto Scan and 8 Auto Cruise operated by OSD menu

※Attention:

Power supply is recommended at least 200W for normal work of pan tilt, housing, camera, lens and heaters

3. Installation Provisions

3.1 Before installation

Unpack the product heeding all accessories specified in the checklist (Table 2), please contact vendor if anything missed.

Carefully keep the original material after unpacking in case of shipping it back.

Attention: Accidental damage will occur by not using original material and cause extra cost.

Table 2 Checklist

#	Accessories	Qty	Remark
1	User Manual	1	
2	Connection Tube	1	Protect cables from Pan/Tilt to Housing designed for surge protection
3	Screws: M8X45	3	Fix Pan/Tilt to mounting place
4	Mounting template	1	Template for mounting holes pattern

3.2 Installation Personnel

Installation should be done only by qualified personnel:

3.2.1 Basic knowledge and installation skills of CCTV system.

3.2.2 Basic knowledge and operation skills of low voltage route.

3.2.3 Capability of understanding this user manual.

Attention: This manual is for use by qualified personnel only. To reduce the risk of any damage, never disassemble the product or loosen screws except qualified personnel.

3.3 Mounting place

3.3.1 The mounting place should be capable of supporting the space of the unit with all accessories (See dimensions in Table 3 for reference)

Table 3 Dimensions

Dimensions	L x W x H: 339 ×196 ×371mm

3.3.2 The mounting place should be capable of supporting 4 times the weight of the unit with all accessories (See weight in Table 4 for reference).

Table 4 Weight

Total Weight	60Kg(17Kg for Pan/Tilt, 43Kg for load)

3.4 Tools for installation

Shifting wrench, cross head screwdriver, inner hex wrench, and wire stripper.

3.5 Cables Provisions

3.5.1 Video cable

75ohm copper conductor, 95% copper braided coaxial shielded cable

Recommended model number:

75-3, around 220 meters

75-5, around 300 meters

75-7, around 450 meters

3.5.2 RS-485 communication cable

Shielded Twisted Pair (STP). Shielded layer must be connected well to the GND.

Reference data of baud rate and transmission distance in 0.56mm diameter STP:

2.400, around 1,800 meters

4,800, around 1,200 meters

9,600, around 800 meters

3.5.3 24VAC power cable

Data in Table 5 for reference

Table 5

Diameter / Distance (meter) / Power (Watt)	0.80mm	1.00mm	1.25mm	2.00mm
30	28	45	72	183
40	21	34	54	137
50	17	27	43	110
60	14	22	36	91
70	12	19	31	78
80	10	17	27	68
90	9	15	24	61
100	8	13	21	55
110	7	12	19	49
120	7	11	17	45
130	6	10	16	42
140	6	9	15	39
150	5	9	14	36
160	5	8	13	34
170	4	7	12	32
180	4	7	11	30
190	4	7	11	28
200	4	6	10	27

4. Installation

4.1 Structure

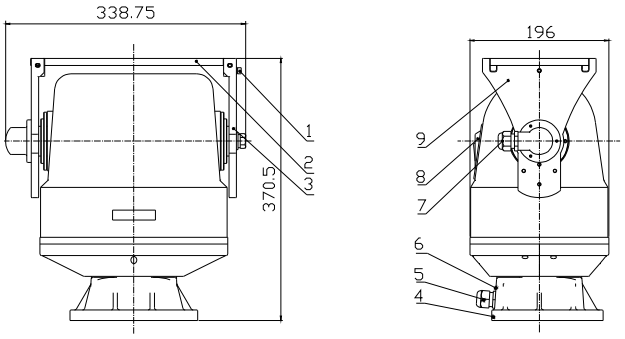


Figure 1

1. M5 inner hex screws (6 totally)
2. Housing mounting plate
3. Right arm
4. Base
5. Cable gland (to outside)
6. Base door
7. Cable gland (to housing)
8. Configuration Door
9. Left arm

4.2 Initial Settings

4.2.1 Loosen the screws around Configuration Door and remove the door. 2 switches on the circuit board in the Pan/Tilt cover are for initial settings. See Figure 2

Attention: Assemble the camera cover back after initial settings.

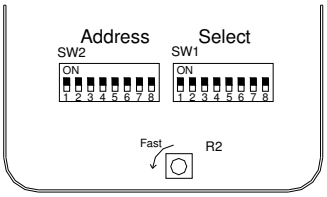


Figure 2

4.2.2 Communication protocol settings

Bit 1, 2, 3, 4 of SW1 is for protocols configuration refer to Table 6

Table 6

	Bit 1	Bit 2	Bit 3	Bit 4
Pelco-P	OFF	ON	OFF	OFF
Pelco-D	ON	ON	OFF	OFF

4.2.3 Baud rate settings

Bit 5, 6 of SW1 is for baud rate configuration refer to Table 7

Table 7

Bit 5	Bit 6	Baud Rate
OFF	OFF	2400
ON	OFF	4800
OFF	ON	9600
ON	ON	19200

4.2.4 Preset lens settings

Configure Bit 7 of SW1 to ON for motorized lens with preset function.

Attention: Bit 7 is configured to OFF as factory settings.

4.2.5 Terminal resistance settings

Only configure Bit 8 of SW1 to ON if the dome is at the terminal of control bus, the 120 ohm resistance will be connected.

4.2.6 ID settings

SW2 is for setting ID in binary coding (See Table 8). Bit 1 to Bit 8 are available.

Table 8

ID	Bit 1	Bit 2	Bit 3	Bit 4	Bit 5	Bit 6	Bit 7	Bit 8
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
.....	.....							
254	OFF	ON	ON	ON	ON	ON	ON	ON
255	ON	ON	ON	ON	ON	ON	ON	ON

4.2.7 Adjust voltage to Lens

See section 5.1.

4.3 Installation

4.3.1 Connect Pan/Tilt to system

Loosen the screws around base door and remove the door. Slide power board off base through guide. See Figure 3

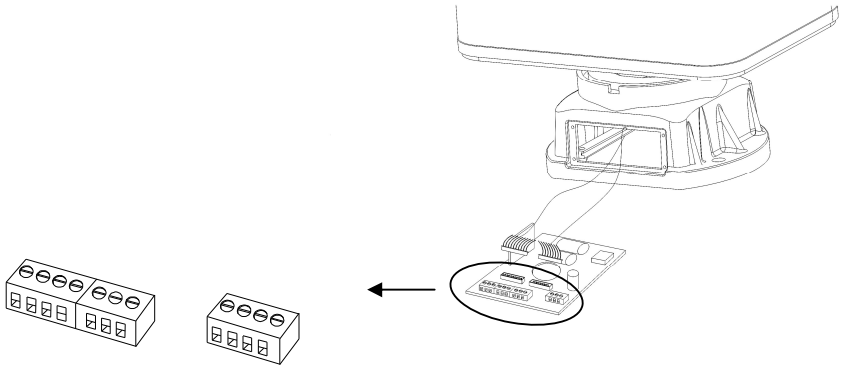
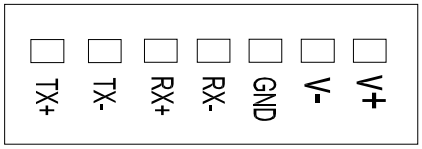


Figure 3

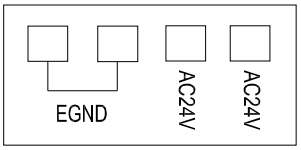
(1) 7-pin connector



Definition:

V+: Video output +
V-: Video output grand
GND: Groud
RX-: RS485-B/ RS422-RX-
RX+: RS485-A/ RS422-RX+
TX-:RS422-TX-
TX+:RS422-TX+

(2) 4-pin connector



Definition:

AC24V: Input 24VAC
AC24V: Input 24VAC
EGND: Surge Ground

Attention: The dome should be connected to the ground reliably for effective surge protection, refer to relevant national standard.

4.3.2 Pass all cables through cable gland on the base door. Connect cables to connectors on power board according to definitions specified in section 4.3.1. Slide power board into base along the guide. Attach the base door onto base and tighten screws around base door. Tighten cable gland.

4.3.3 Connect Pan/Tilt to housing

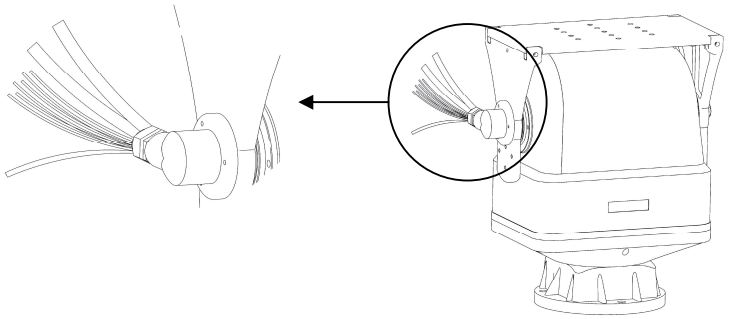


Figure 4

4.3.3.1 Motorized Lens Preset –

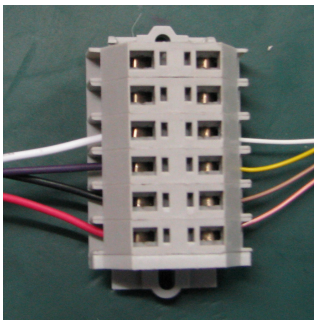
Motorized lens			
Power		Focus Preset	Zoom Preset
+3.3VDC	- 3.3VDC		
Red	Black	Purple	White

4.3.3.2 Motorized Lens Control –

Lens					
+12VDC	GND	Zoom	Focus	Iris	Com
Red	Black	Gray	White	Purple	Green

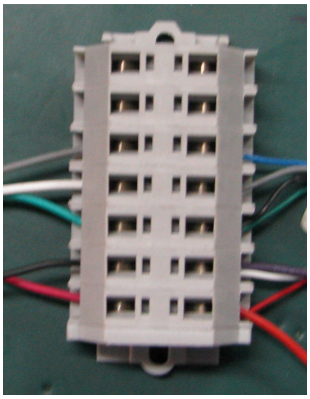
4.3.3.2.1 Connection between Pan Tilt and Motorized Lens

Lens Preset	
Pan/tilt	**DLR2136-15300P Lens**
Red--VDC	Pink--Power
Black--GND	Brown--GND
White--Zoom In	White--Zoom Output
Purple--Focus In	Yellow--Focus Output



Lens Preset

Lens control	
Pan/tilt	**DLR2136-15300P Lens**
Gray--Zoom In	Blue—Zoom+
White--Focus In	Gray—Focus+
	Green—Zoom-
Green--COM	Black—Focus-
Purple-Iris	N/C (Auto Iris)
Red--DC+12V	Red--DC+12V
Black--GND	White--DC-12V



Lens Control

4.3.3.3 Aux cables

Definition:

Housing Power 24VAC		Aux 1		Aux 2		Aux 3		Aux 4	
Yellow	Yellow	White	White	Orange	Orange	Blue	Blue	Gray	Gray

4.3.3.4 Video cable

4.3.4 Install housing to Pan/Tilt

4.3.4.1 Pan Tilt to Plate are recommended

4.3.4.2 Remove housing mounting plate. Attach housing to this plate.

4.3.4.3 Mounting holes pattern on housing mounting plate

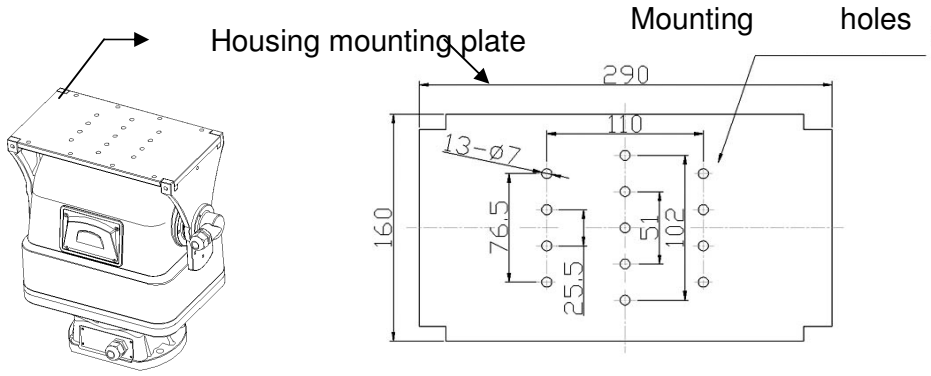


Figure 5

4.3.4.4 Re-install mounting plate back to left and right arms

4.3.4.5 Pass all cables through connection tube (attached in shipping box) for surge protection. Connect 2 ends of this tube to cable gland on pan/tilt and housing.

4.3.5 Mount Pan/Tilt

4.3.5.1 Mounting template

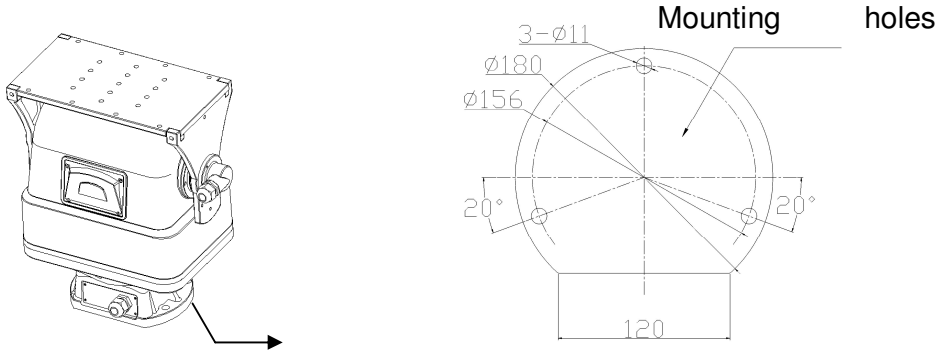


Figure 6

4.3.5.2 Using the template (attached) to mark the fastener positions on the

mounting surface and prepare holes. See Figure 7

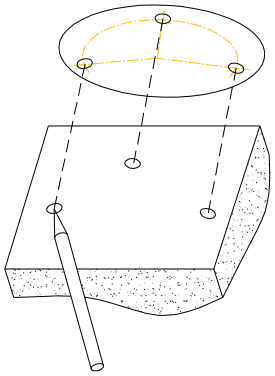
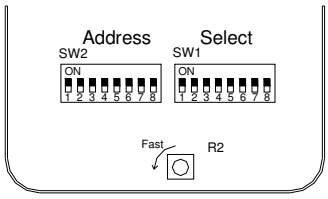


Figure 7

4.3.5.3 Mount Pan/Tilt to prepared place by M8X45 screws (attached in shipping box)

5. Appendix

5.1 Lens voltage adjustment



R2 is available for adjusting voltage to lens. Default value of R2 is DC10V±1V. Rotate button on R2 counter-clockwise is to increase voltage.

Attention: Only qualified person is able and allowed to adjust this parameter. Errors by wrong operation will cause abnormal work

5.2 Lens Installation

Installation and Debugging

a. Open the front and back lid
b. mount the lens to the camera, then clockwise rotate the lens to the appropriate position
c. Connect the electric wires following pg. 12, then turn on the power source.
d. Open the iris。
e. Control the zoom motor to make it to be the short focal length condition, and then adjust the CCD adjustment ring to get a clear image
f. Control the zoom motor to make it to be the long focal length condition, and then adjust the CCD adjustment ring to get a clear image
g. Repeat 5-6 times to make it clear in this source.
h. If you still can't get a good image, the reason is the adjustment ring is not tight
i. Support 256 preset position.
j. controlled by keyboard.
k. Use RS-485 and Pelco D & P protocol.

The lens has been inspected and tested. Do not disassemble it.
The lens is too delicate to break, please don't allow to hit the lens with heavy objects.

MAINTENANCE

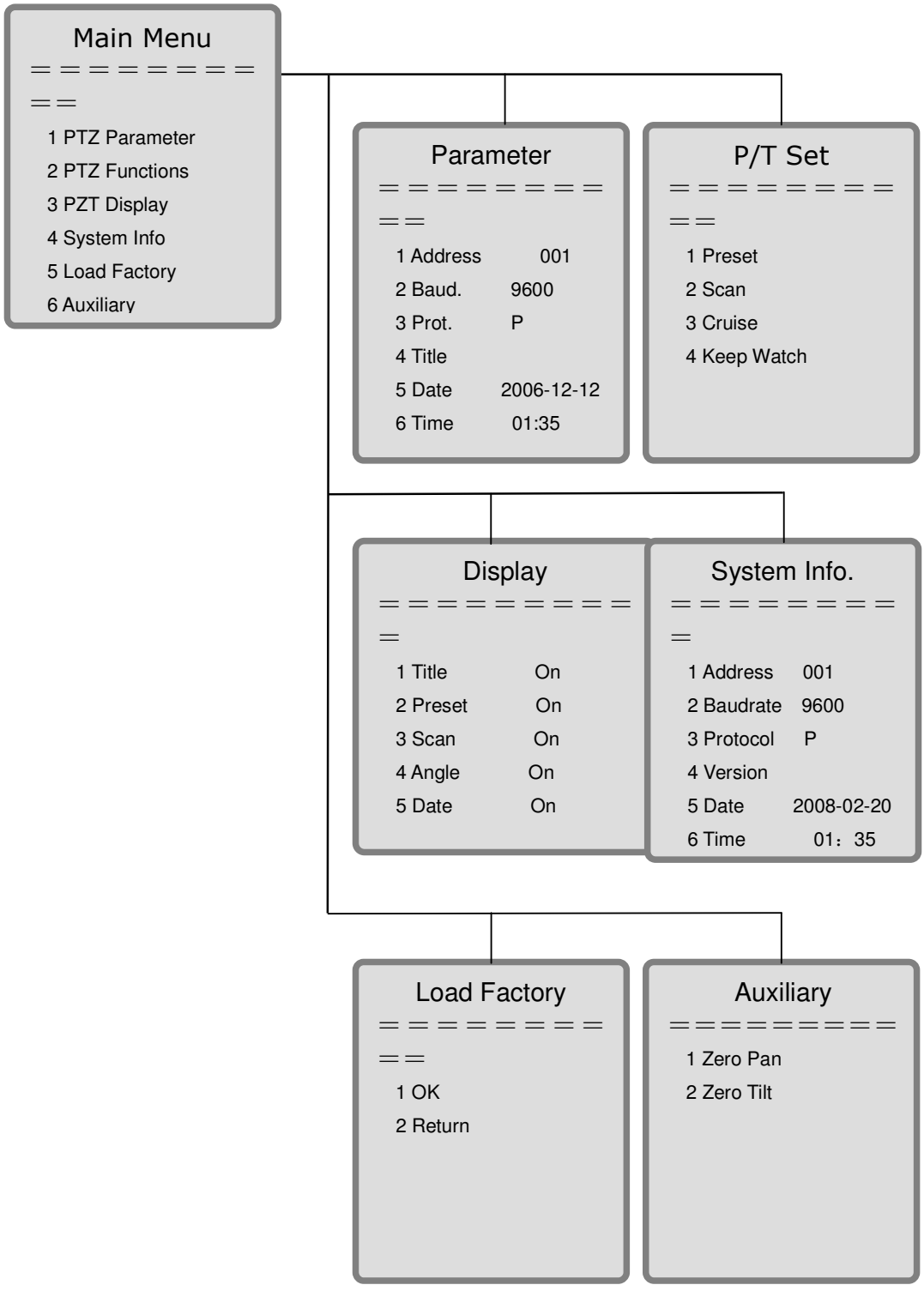
To protect the glass, the lens has reflection reducing film. It must not be wiped by gauze. If there is dust, it can be wiped by absorbent cotton with alcohol.
After using the lens, you had better cover the lid to prevent the glass from the dust or be damaged by some other things
When the lens is not in use please keep the iris, focus and zoom at an appropriate position. Do not position at either extreme.

TROUBLE SHOOTING HINTS

When no image or blurred image

- Ensure that the power source is ok
- Ensure that the front protection glass is clear
- Ensure that the iris is ok

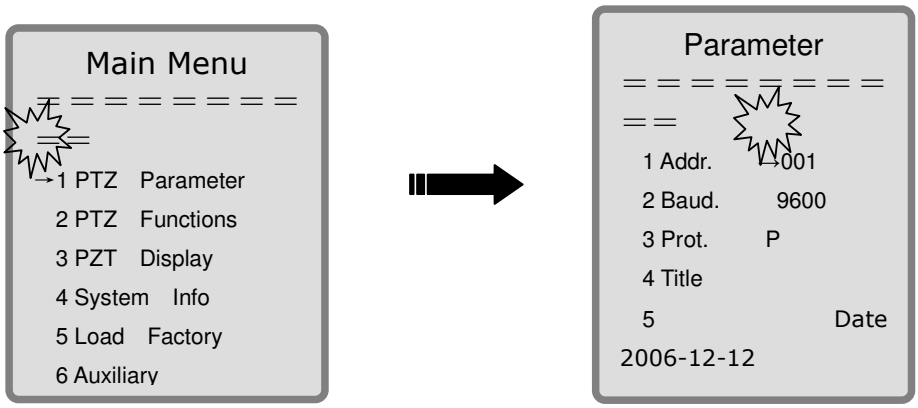
5.3 OSD Menu Tree



5.3.1Accessing Main Menu

To call up the main menu, **Call Preset 95**

5.3.1.1Main Menu



To make selections in the main menu, use the following controls:

Joystick: Move **up or down** to position cursor or to toggle between selections

Joystick: Move **right** to Enter

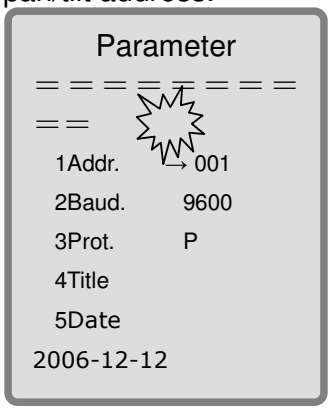
Joystick: Move **left** to Exit

5.1.2Pan/Tilt settings

Position the cursor (->) beside **PTZ Parameter**, **right** to enter the **PTZ Parameter** menu

1. **Address settings**

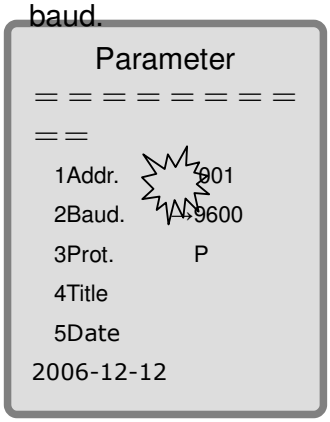
   Position the cursor (->) beside **Addr.**, **right** to move the cursor (->) to configure pan/tilt address.



   Move the Joystick **up** to plus 1, **down** to minus 1, **right** to plus 10, **left** to save and exit address settings.

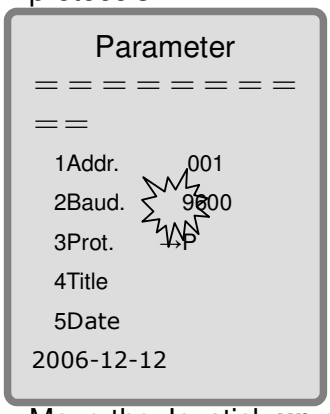
   Attention: DIP address configuration would be invalid after address configuration through OSD menu. Re-configure DIP address to make it available.

2. **Baud rate settings**
   Position the cursor (->) beside **Baud.**, **right** to move the cursor (->) to configure baud.



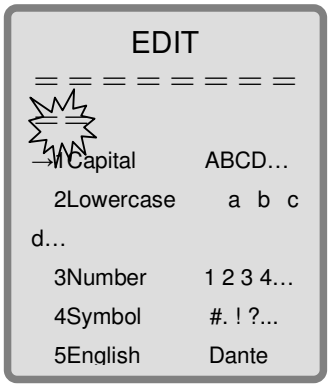
   Move the Joystick **up** or **down** to toggle through baud rate (2400, 4800, 9600, 19200), **left** to save and exit baud rate settings

3. **Protocol settings**
   Position the cursor (->) beside **Pro.**, **right** to move the cursor (->) to configure protocols



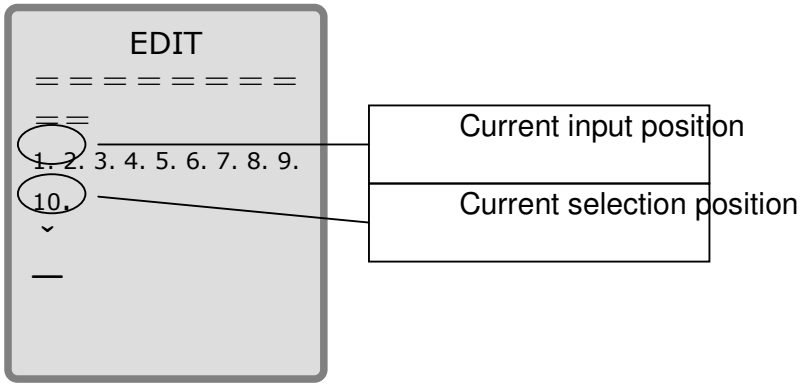
   Move the Joystick **up** or **down** to toggle through protocols (Pelco D, Pelco P,), **left** to save and exit protocol settings

4. **Title settings**
   Position the cursor (->) beside **Title**, **right** to enter the character **Edit** menu



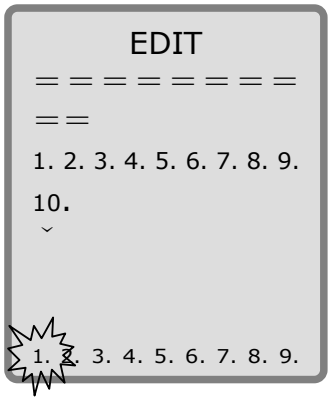
(1) Input Capital

Position the cursor (->) beside **Capital**, **right** to enter the capital **Edit** menu

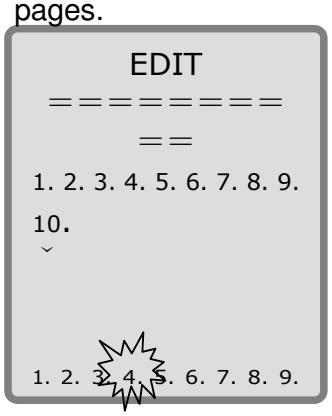


The pointer (˘) positions to insert a character. The pointer (_) positions to current selected character.

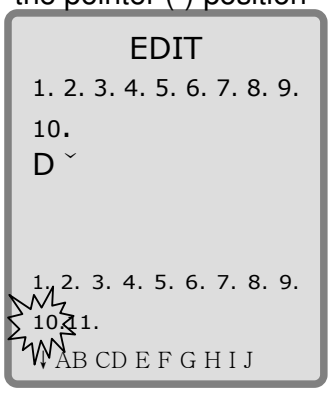
Move Joystick **down** to select characters.



Position the pointer (_) under **down arrow** (↓), **up** or **down** to toggle through pages.



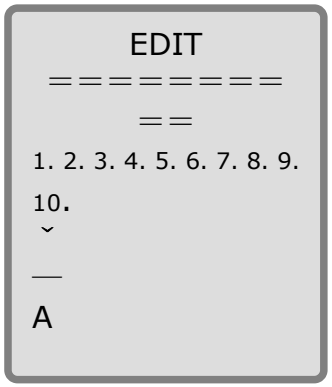
Position the pointer (_) under capitals, **up** to enter. Selected character appears at the pointer (ˇ) position



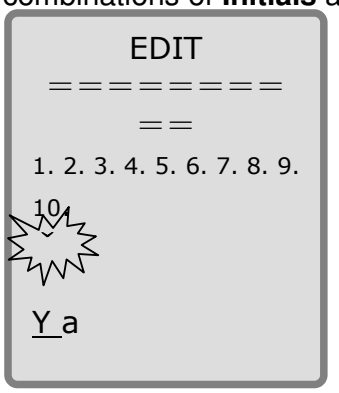
Repeat the operations to input other characters. **Twist Joystick** or **Zoom in/out** to return to previous menu.

Position the pointer (_) under capitals, **left** to delete.

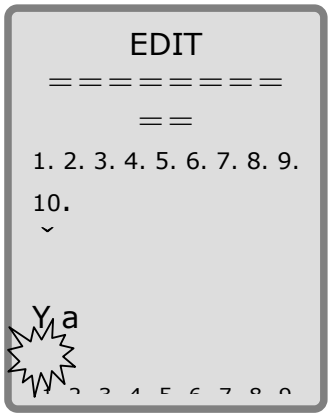
(2) Input Lowercase
Same as above (1) Input Capital
(3) Input Number
Same as above (1) Input Capital
(4) Input Symbol
Same as above (1) Input Capital
(5) Input English
Position the cursor (->) beside **English**, **right** to enter the English



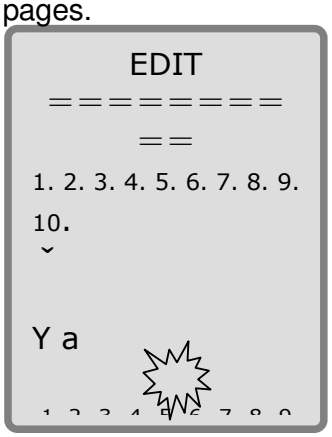
The pointer (˅) positions to insert a character. The pointer (_) positions to current selected character.
Move Joystick **down** to edit English. Move Joystick **up** or **down** to toggle through combinations of **Initials** and **Finals**, **right** to toggle between **Initials** and **Finals.**



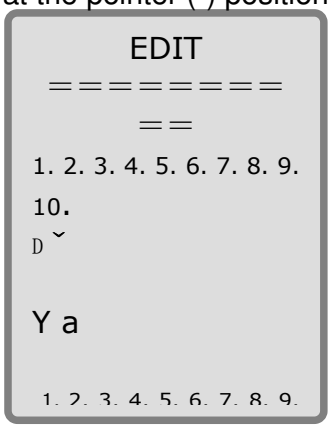
Move Joystick **right** to select characters.



Position the pointer (_) under **down arrow** (↓), **up** or **down** to toggle through pages.



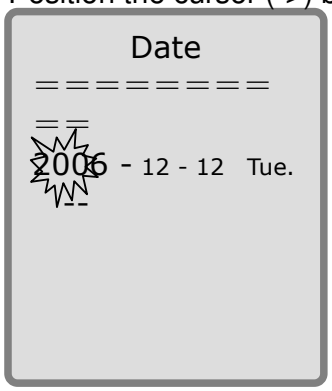
Position the pointer (**_**) under characters, **up** to enter. Selected character appears at the pointer (˘) position



Repeat the operations to input other characters. **Twist Joystick** or **Zoom in/out** to return to previous menu.

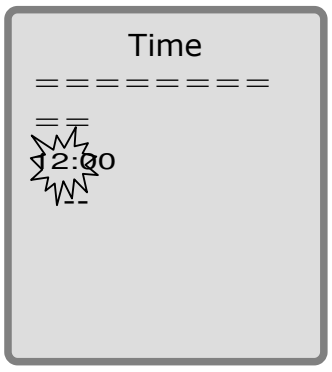
Caution**: Up to 10 characters for Pan/Tilt Title**

5. **Date settings**
   Position the cursor (->) beside **Date**, **right** to enter the **Date** menu



Move Joystick **right** to toggle through **year**, **month** and **date**, **up** to plus 1, **down** to minus 1. **Move Joystick left** or **Twist Joystick** or **Zoom in/out** to save and return to previous menu.

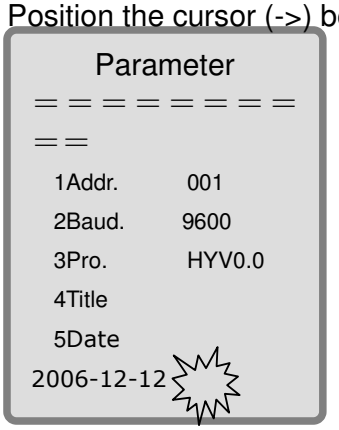
6. **Time settings**
   Position the cursor (->) beside **Time**, **right** to enter the **Time** menu.



Move Joystick **right** to toggle through **hour** and **minute**, **up** to plus 1, **down** to minus 1. . **Move Joystick left** or **Twist Joystick** or **Zoom in**/**out** to save and return to previous menu.

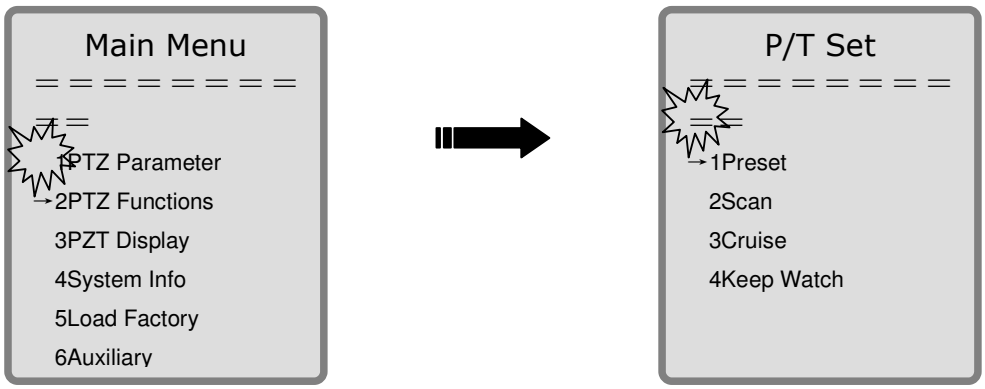
7. **Language settings**

Position the cursor (->) beside **Lang.**, **right** to configure language



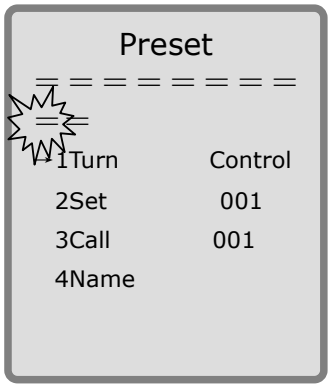
Move Joystick **up** or **down** to toggle between Lang XYZ and **English**, **left** to save and exit to language configuration

5.1.3 Pan/Tilt functions

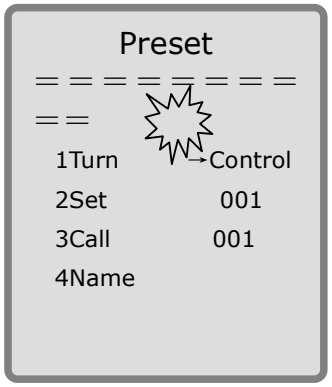


Position the cursor (->) beside **PTZ Functions**, **right** to enter the **P/T Set** menu

1. **Preset**
   Position the cursor (->) beside **Preset**, **right** to enter the **Preset** menu



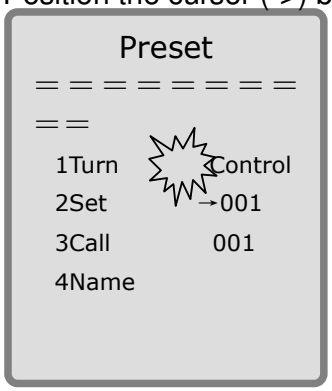
(1) Turning pan/tilt
Position the cursor (->) beside **Turn**, **right** to control the pan/tilt.



Move **the Joystick** to move the pan/tilt to the desired position and **call preset 1** to return to menu operation.

(2) Set preset

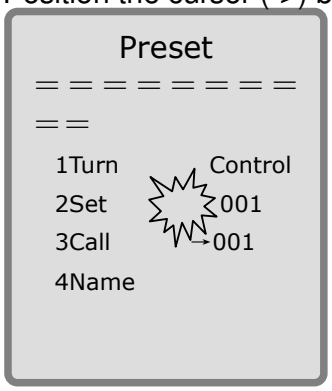
Position the cursor (->) beside **Set**, **right** to configure preset.



Move the Joystick **up** to plus 1, **down** to minus 1, **right** to plus 10, **left** to set preset and exit configuration. **OK** flashes quickly for a successful configuration sign.

(3) Call Preset

Position the cursor (->) beside **Call**, **right** to configure preset



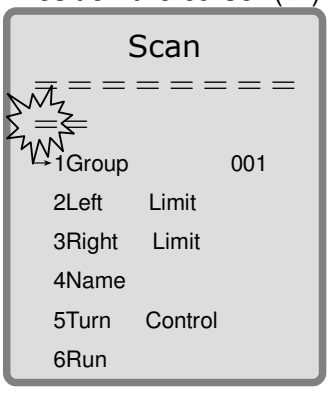
Move the Joystick **up** to plus 1, **down** to minus 1, **right** to plus 10, **left** to set preset and exit configuration.

(4) Name Edit

Program a name (displayed on screen) for each preset. Refer to **5.1.2 Pan/Tilt settings**, **section 4 Tilt settings**

2. Auto Scan

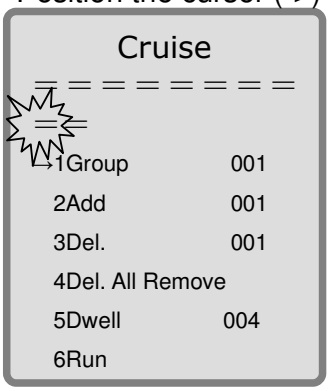
Position the cursor (->) beside **Scan**, **right** to enter the **Scan** menu



(1) Group settings
Position the cursor (->) beside **Group**, **right** to configure group. Move Joystick **up** or **down** to toggle through numbers of group (1~8), **left** to save and exit group configuration
(2) Left limit stop settings
Position the cursor (->) beside **Left Limit, right** to set left limit. **OK** flashes quickly for a successful configuration sign.
(3) Right limit stop settings
Position the cursor (->) beside **Right Limit**, **right** to set right limit. **OK** flashes quickly for a successful configuration sign
(4) Name edit
Program a name (displayed on screen) for each preset. Refer to **5.1.2 Pan/Tilt settings**, **section 4 Tilt settings**
(5) Turning pan/tilt
Position the cursor (->) beside **Turn**, **right** to control the pan/tilt.
(6) Run Auto Scan
Position the cursor (->) beside **Run**, **right** to run auto scan. **Call preset 1** to exit menu. **Tap Joystick** to stop auto scan. **OK** flashes quickly for a successful configuration sign.
(7) Stop Auto Scan
Position the cursor (->) beside **Stop**, **right** to stop auto scan. **Call preset 1** to exit menu. **Tap Joystick** to stop auto scan. **OK** flashes quickly for a successful configuration sign.

3. Cruise

Position the cursor (->) beside **Cruise**, **right** to enter the **Cruise** menu



(1) Group settings
Position the cursor (->) beside **Group**, **right** to configure group. Move Joystick **up** or **down** to toggle through numbers of group (1~8), **left** to save and exit group configuration
(2) Add presets

Position the cursor (->) beside **Add, right** to configure presets. Move Joystick **up** to plus 1, **down** to minus 1, **right** to plus 10, **left** to add the preset into cruise group. **OK** flashes quickly for a successful configuration sign.

(3) Delete presets

Position the cursor (->) beside **Del.**, **right** to configure presets. Move Joystick **up** to plus 1, **down** to minus 1, **right** to plus 10, **left** to delete the preset into cruise group. **OK** flashes quickly for a successful configuration sign

(4) Delete all presets

Position the cursor (->) beside **Del. All**, **right** to delete all presets, **left** to exit the configuration

(5) Dwell time settings

Position the cursor (->) beside **Dwell**, **right** to configure dwell time. Move Joystick **up** to plus 1, **down** to minus 1, **right** to plus 10, **left** to save and exit dwell time configuration.

(6) Run Cruise

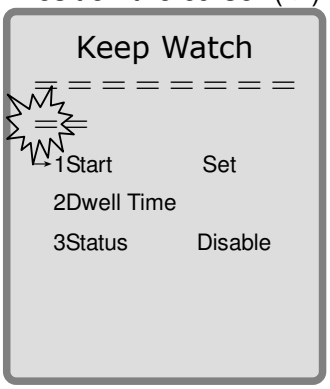
Position the cursor (->) beside **Run**, **right** to run cruise. **Call preset 1** to exit menu. **Tap Joystick** to stop auto scan.

(7) Stop Cruise

Position the cursor (->) beside **Stop**, **right** to stop auto scan. **Call preset 1** to exit menu. **Tap Joystick** to stop auto scan.

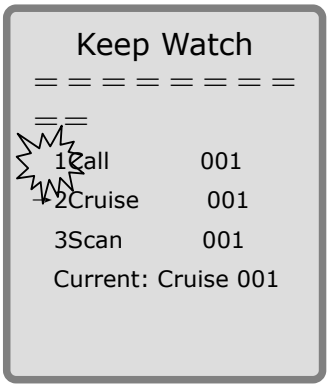
4. Keep Watch

Position the cursor (->) beside **Keep Watch**, **right** to enter the **Keep Watch** menu



(1) Functions for Keep Watch

Position the cursor (->) beside **Start Set**, **right** to enter the functions for **Keep Watch** menu

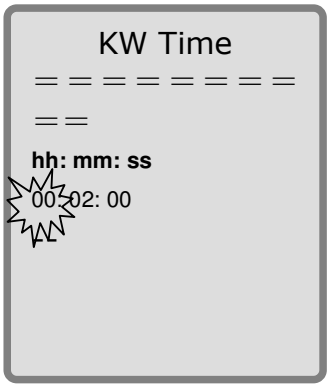


Move Joystick **up** or **down** to toggle through functions for Keep Watch (Call preset, Cruise, Scan), right to configure each functions. Move Joystick **up** or **down** to toggle through numbers (cruise groups/scan lines), **left** to save and exit configurations.

Attention: Only the three functions are available for Keep Watch

Current shows configured current function for Keep Watch.
Move Joystick **left** to return to previous menu

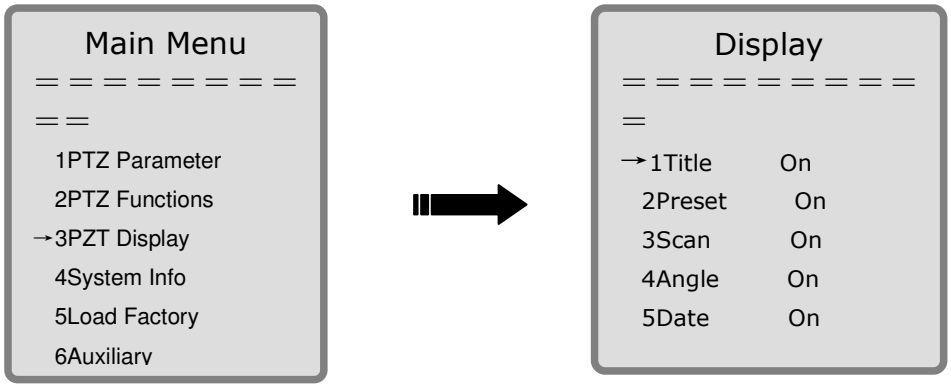
(2) Dwell time for Keep Watch
Position the cursor (->) beside **Dwell Time**, **right** to enter the **KW Time** menu



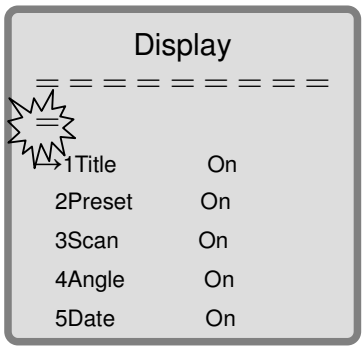
Move Joystick **left** or **right** to toggle through **hour**, **minute** and **second**, **up** or **down** to toggle through numbers for each configuration. **Move Joystick left** or **Twist Joystick** or **Zoom in/out** to save and return to previous menu.

(3) Enable/Disable Keep Watch
Position the cursor (->) beside **Status**, **right** to disable/enable Keep Watch.
Move Joystick **up** or **down** to toggle between **disable** and **enable**, **left** to save and exit configuration

5.1.4 Display Settings

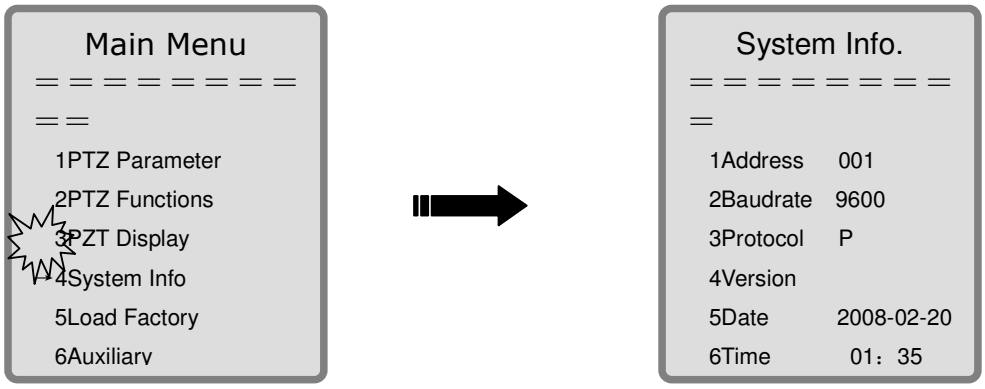


Position the cursor (->) beside **PTZ Display**, **right** to enter the **Display** menu



Position the cursor (->) beside **Title**/**Preset**/**Scan**/**Angle**/**Date**, **right** to enable/disable display.
Move Joystick **up** or **down** to toggle between **On** and **Off**, **left** to save and exit configuration

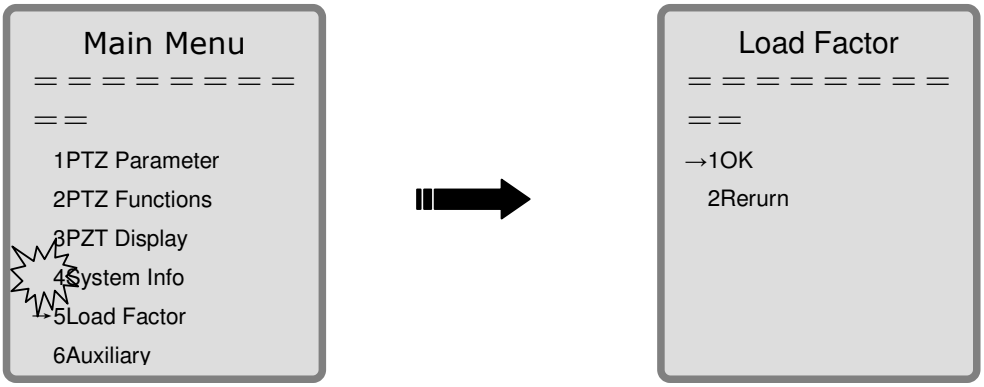
5.1.5 System Info.



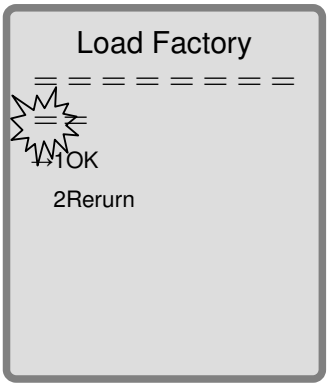
Position the cursor (->) beside **System Info.**, **right** to enter the **System Info.** menu.

This page is only for inquiry, not available for edit.
Move Joystick **left** to return to previous menu (Main Menu)

5.1.6 load Factor



Position the cursor (->) beside **Load Factor**, **right** to enter the **Load Factor** menu.

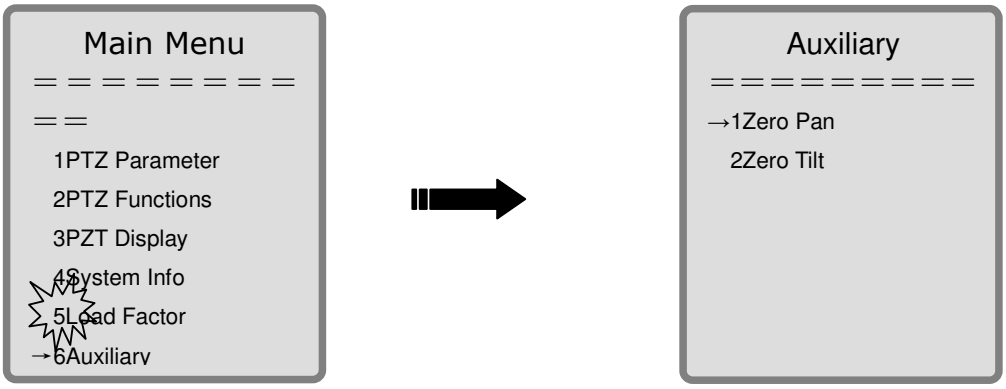


Move joystick up or down to toggle between **OK** and **Return**, position the cursor (->) beside **OK**, **right** to load factory configuration, **left** to return to previous menu (Main Menu).

Attention: After implement Load Factor, all configured presets, auto scan, auto cruise and keep watch are deleted.

Attention: Do not operate the Pan/Tilt in first 15 seconds after load factor.

5.1.7Auxiliary



Position the cursor (->) beside **Auxiliary**, **right** to enter the **Auxiliary** menu.

1. **Zero point Settings**
   Position the cursor (->) beside **Zero Pan/Zero Tilt**, **right** to configure origin position Move Joystick **left** to save and exit configuration. **OK** flashes quickly for a successful configuration sign.